## REMARKS/ARGUMENTS

This Amendment is submitted in reply to the Office Action dated June 13, 2007. The Applicants respectfully request reconsideration and further examination of the patent application under 37 C.F.R. § 1.111.

**Summary of the Examiner's Rejections**

Claims 1-40 were rejected under 35 U.S.C. 112 (second paragraph) as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-3, 15-16 and 28-31 were rejected under 35 U.S.C. 103(a) as being unpatentable over Malhotra (US 2003/0161275) in view of the standard entitled "Part 3: Media Access Control (MAC) Bridges-Amendment 2: Rapid Reconfiguration" (hereinafter known as the "standard").

Claims 4-7 and 17-20 were rejected under 35 U.S.C. 103(a) as being unpatentable over Malhotra (US 2003/0161275) in view of the standard entitled "Part 3: Media Access Control (MAC) Bridges-Amendment 2: Rapid Reconfiguration" (hereinafter known as the "standard") in further view of Seaman (US 6,611,502).

**Summary of Amendment**

Applicants have canceled Claims 3, 8-14, 16, 21-27 and 35-40 (without prejudice) and amended Claims 1-2, 15 and 32. No new subject matter has been added.

**Remarks regarding § 112 (second paragraph) rejections**

Claims 1, 15 and 32 were rejected under 35 U.S.C. 112 (second paragraph) because the Examiner did not understand exactly the meaning of the claimed terminology "immediately transmitting the high-priority control messages that contain information that contributes to the

re/convergence of an unstable topology to a stable topology in the network". Applicants have amended independent Claims 1, 15 and 32 to recite the following "immediately transmitting the high-priority control messages by removing a restriction imposed on the transmit parameter by the transmit hold parameter, wherein the high-priority control messages contain information which will be used by at least one remote bridge to aid in the re/convergence of an unstable topology to a stable topology in the network". Applicants respectfully submit that this claimed language along with the other claimed language in the amended independent Claims 1, 15 and 32 particularly points out and distinctly claims the subject matter which the Applicant regards as the invention. As such, Applicants respectfully request the removal of this § 112 (second paragraph) rejection.

In addition, Claims 8-14, 21-27 and 35-40 were rejected under 35 U.S.C. 112 (second paragraph) as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicants have canceled Claims 8-14, 21-27 and 35-40 without prejudice. As such, Applicants respectfully request the removal of this § 112 (second paragraph) rejection.

**Remarks regarding 103(a) rejections**

Applicants respectfully submit that Malhotra and/or the "standard" fail to teach or suggest the present invention as recited in amended independent Claims 1, 15 and 32. The amended independent Claims 1, 15 and 32 are recited below:

> 1. A method for selectively eliminating latencies in the exchange of control messages within a network during the re/convergence of the network, said method comprising the steps of:
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> classifying to-be-transmitted control messages into either low-priority control messages or high-priority control messages;
>
> limiting the transmission rate of the low-priority control messages such that when a transmit parameter has a value that reaches a predetermined limit which is set by a transmit hold parameter then the low-priority control messages are not transmitted until the value of the transmit parameter is decremented; and
>
> immediately transmitting the high-priority control messages by removing a restriction imposed on the transmit parameter by the transmit hold parameter, wherein the high-priority control messages contain information which will be used by at least one remote bridge to aid in

the re/convergence of an unstable topology to a stable topology in the network (emphasis on main distinguishing limitations).

15. A network comprising:
a plurality of links;
a plurality of bridges coupled to the links, each bridge executing a protocol that selectively eliminates latencies in the exchange of control messages between bridges during the re/convergence of the network by:
classifying to-be-transmitted control messages into either low-priority control messages or high-priority control messages;
limiting the transmission rate of the low-priority control messages such that when a transmit parameter has a value that reaches a predetermined limit which is set by a transmit hold parameter then the low-priority control messages are not transmitted until the value of the transmit parameter is decremented; and
immediately transmitting the high-priority control messages by removing a restriction imposed on the transmit parameter by the transmit hold parameter, wherein the high-priority control messages contain information which will be used by at least one remote bridge to aid in the re/convergence of an unstable topology to a stable topology in the network (emphasis on main distinguishing limitations).

32. A device comprising:
a plurality of state machines that selectively eliminates latencies in the exchange of control messages during the re/convergence of a network by:
classifying to-be-transmitted control messages into either low-priority control messages or high-priority control messages;
limiting the transmission rate of the low-priority control messages such that when a transmit parameter has a value that reaches a predetermined limit which is set by a transmit hold parameter then the low-priority control messages are not transmitted until the value of the transmit parameter is decremented; and
immediately transmitting the high-priority control messages by removing a restriction imposed on the transmit parameter by the transmit hold parameter, wherein the high-priority control messages contain information which will be used by at least one remote bridge to aid in the re/convergence of an unstable topology to a stable topology in the network (emphasis on main distinguishing limitations).

The teachings of Malhotra and/or the "standard" differ significantly from the present invention recited in the amended independent Claims 1, 15 and 32. The pending claimed invention is associated with selectively eliminating latencies in the exchange of control messages during the re/convergence of a network. To selectively eliminate the latencies in the exchange of the control messages, the to-be-transmitted control messages are classified into either low-priority control messages or high-priority control messages. Then, the transmission rate of the

low-priority control messages is limited in a manner such that when a transmit parameter has a value that reaches a predetermined limit that is set by a transmit hold parameter then the low-priority control messages are not transmitted until the value of the transmit parameter is decremented. While, the high-priority control messages are immediately transmitted by removing a restriction imposed on the transmit parameter by the transmit hold parameter wherein the high-priority control messages contain information which will be used by at least one remote bridge to aid in the re/convergence of an unstable topology to a stable topology in the network. Applicants respectfully submit that Malhotra and/or the "standard" fails to disclose or teach the limitations recited in the amended independent Claims 1, 15 and 32.

In the Office Action, the Examiner cited Malhotra and the "standard" to reject the original independent Claims 1, 15 and 32. However, Applicants respectfully submits that Malhotra fails to teach a method that is related to the selective elimination of latencies in the exchange of control messages during the re/convergence of a network as is claimed in the present invention. Instead, Malhotra teaches a method where a bridge upon detecting a failure in the network flushes its MAC table and flushes data frames in the buffer and if desired that bridge can send a special message ("X BPDU") to at least it's neighbors in the spanning tree to inform them of the failure so they can flush their MAC table and any data frames in the buffer (see paragraph [0030]). As can be seen, Malhotra fails to disclose or suggest a scheme that is related to the selective elimination of latencies in the exchange of control messages during the re/convergence of a network. In fact, Malhotra teaches that after a failure and after a bridge flushes its MAC table and data frames then a standard build up of the spanning tree takes place (see paragraph [0031]). This is not the case with the claimed present invention as is discussed in detail in the following paragraphs.

Applicants respectfully submit that Malhotra fails to disclose the: (1) the claimed operation where the to-be-transmitted control messages are classified into either low-priority control messages or high-priority control messages; (2) the claimed operation where the transmission rate of the low-priority control messages is limited in a manner such that when a

transmit parameter has a value that reaches a predetermined limit that is set by a transmit hold parameter then the low-priority control messages are not transmitted until the value of the transmit parameter is decremented; and (3) the claimed operation where the high-priority control messages are immediately transmitted by removing a restriction imposed on the transmit parameter by the transmit hold parameter wherein the high-priority control messages contain information which will be used by at least one remote bridge to aid in the re/convergence of an unstable topology to a stable topology in the network. In the Office Action, the Examiner indicated that Malhotra teaches "BPDU or control messages are given a priority which means that they have been classified" and that "BPDUs are inherently immediately transmitted upon a topology change which causes a network to converge to a more stable state" (see page 3 in Office Action). In making these statements, the Examiner cited the following:

> [0036] Preferably, BPDUs are given priority in transmission through the network over regular data frames. This can be implemented for example by giving a higher Quality of Service (QoS) to BPDU than to regular data frames. As transmission of the BPDUs has very little delay, BPDUs can travel through the network fast, also helped by the fact that no time consuming collisions can occur. As a result the process of network restoration, i.e. the convergence to a new topology after failure is accelerated. Also the Max Age timer can be set lower, as the risk of BPDUs being dropped is significantly reduced. As a result bridge failures can be detected sooner.

Applicants respectfully submits that the Examiner's interpretation of Malhotra is misplaced in that Malhotra does not teach or suggest the claimed operation where the to-be-transmitted control messages are classified into either low-priority control messages or high-priority control messages. In particular, Malhotra does not classify BPDUs (control messages) into low-priority control messages or high-priority control messages as claimed but instead classifies all BPDUs to have a higher QoS than the regular data frames (see paragraph [0036]). Hence, the Examiner's interpretation of Malhotra and subsequent conclusion that "BPDUs or control messages are given a priority which means that they have been classified" is misplaced because in Malhotra all BPDU's (control messages) are classified the same and there is no disclosure where some of the BPDUs are classified as high-priority control messages and other

BPDUs are classified as low-priority control messages. Plus, the Examiner's interpretation of Malhotra and subsequent conclusion that "BPDUs are inherently immediately transmitted upon a topology change which causes a network to converge to a more stable state" is also misplaced. Again, Malhotra teaches that after a failure and after a bridge flushes its MAC table and data frames then a standard build up of the spanning tree takes place (see paragraph [0031]]). Thus, since Malhotra fails to teach where BPDUs (control messages) are classified into low-priority control messages or high-priority control messages it follows Malhotra fails to disclose or teach the claimed operations where the transmission rate of the low-priority control messages is limited while the high-priority control messages are immediately transmitted to aid in the re/convergence of the network.

In addition, Applicants respectfully submit that the "standard" does not cure these defects. In particular, the "standard" does not teach or suggest the claimed operation where the to-be-transmitted control messages (BPDUs per dependent Claim 2) are classified into either low-priority control messages or high-priority control messages. Nor, does the "standard" teach or suggest the claimed operations where the transmission rate of the low-priority control messages is limited while the high-priority control messages are immediately transmitted to aid in the re/convergence of the network. Instead, the "standard" teaches the limiting of the transmission rates of all BPDUs (e.g., configuration BPDUs, RST BPDUs, TCN BPDUs) such that not more than TxHoldCount BPDUs are transmitted in any Hello Time interval (see table 8.3, paragraph 17.1 and pages 48, 75-76 in the "standard"). Moreover, the Applicants make reference to the background section in the pending patent application which discusses the technical problem associated with the "standard" and in particular the problem associated with the transmission limiter TxHoldCount that is solved by the presently claimed invention. Seaman does not cure these defects. In view of at least the foregoing, the Applicants respectfully submit that the pending independent Claims 1, 15 and 32 and their associated dependent Claims 2, 4-7, 17-20, 28-31 and 33-34 are patentable over Malhotra, the "standard" and/or Seaman.

**Conclusion**

Applicants respectfully submit that all of the stated grounds of rejections have been properly traversed, accommodated, or rendered moot. Accordingly, Applicants respectfully request reconsideration of all outstanding objections and rejections and allowance of pending Claims 1-2, 4-7, 15, 17-20 and 28-24 .

It is believed no fee is due for this paper. If this is incorrect, the Commissioner is authorized to charge any fees which may be required for this paper to Deposit Account No. 50-1481.

Respectfully submitted,

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